

# uVision Toolmakers Microscope



## Contact us

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# Product Advantages and Applications

Industrial microscopes have remarkable advantages. They are equipped with a trinocular eyepiece tube and multiple observation methods, allowing for flexible adaptation. With 10X/25 eyepieces and a variety of high-performance objective lenses, they can produce clear images. The manual focusing is precise, and it is equipped with a green semi-circular auxiliary focusing function. The 6-megapixel CCD camera and LED cold light source ensure excellent image acquisition and illumination, enabling high measurement accuracy and meeting diverse industrial inspection requirements.

## Product Advantages

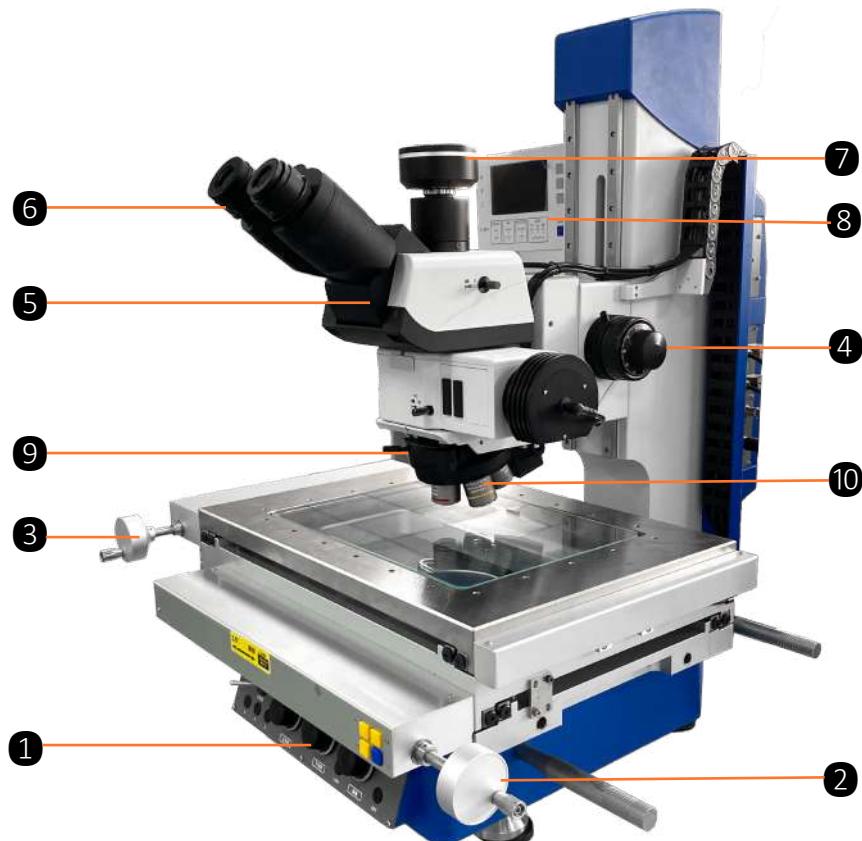
- The light splitting ratio of the trinocular eyepiece tube is 100:0. It is equipped with a variety of observation methods and can be flexibly switched to meet different observation requirements.
- It is equipped with a variety of high-performance objective lenses, such as the Plan-S-APO series, which can provide high imaging quality and accurately restore details.
- An electric converter can be optionally equipped, with an electric motor installed at the rear.
- It supports manual coarse/fine focusing, and there is a green semi-circle for auxiliary focusing, which makes the operation convenient. The focusing is fast and precise.
- The 6-megapixel CCD camera is equipped with a USB3.0 interface, enabling efficient image acquisition and fast data transmission, which is convenient for data processing.
- The LED cold light source provides illumination with stable brightness, reduces heat generation, offers a clear and bright observation field of view, and extends the service life of the device.

## Product Applications

- High-precision objective lenses and manual focusing enable precise inspection of the fine structures of parts, assisting in high-precision assembly work.
- With a variety of observation methods and high-quality light sources, it is conducive to the analysis of the metallographic structure of metal materials and the evaluation of material properties.
- The workbench has a large travel range and high measurement accuracy, which facilitates the observation of the microscopic damage and material details of workpieces. It can be used to observe and analyze the microscopic structure of the chip, the flatness of the chip surface, the circuit wiring, and the interface conditions of materials at various layers.



## Product Detail



**1.Function Control Area**

**2.X-axis Handwheel**

**3.Y-axis Handwheel**

**4.Coaxial Coarse and Fine Focusing Knob**

**5.Eyepiece tube**

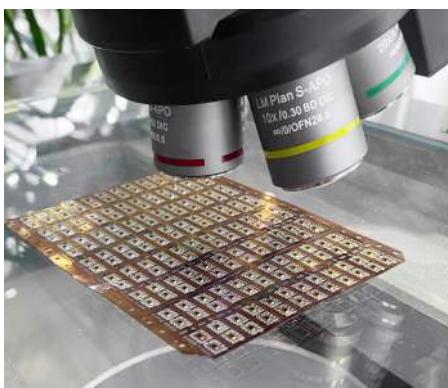
**6.Eyepiece**

**7.Camera**

**8.Digital readout**

**9.Nosepiece**

**10.Objective lens**



## Hardware Advantage



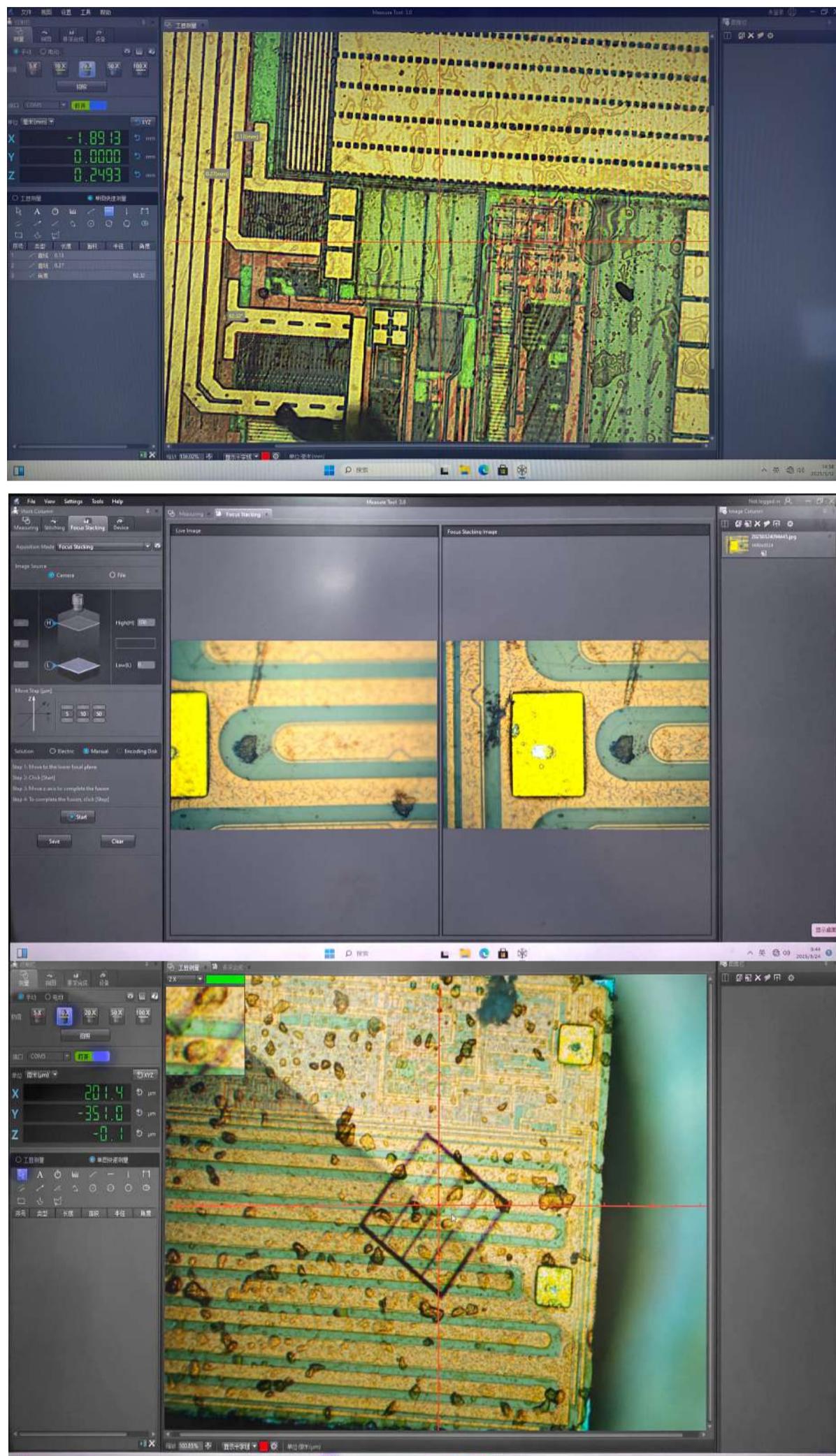
- It has coaxial coarse and fine focusing. The fine focusing micro-movement value is 2 micrometers, and it is equipped with an upper limit buckle, enabling precise and convenient adjustment.
- An electric Z-axis can be optionally equipped, which makes it more convenient for users and enables more precise adjustment.
- It is equipped with a light and dark field conversion pull rod. The optical path design has a simple polarization function. There is a DIC slot on the converter, providing rich optical path functions and a variety of observation methods.

## Hardware Advantage



- The X and Y-axis handwheels achieve micron-level precise positioning thanks to accurate damping control, smooth operation, and fine graduations.
- Working platform: With high precision, strong stability, easy operation and high compatibility, it enables excellent microscopic applications.

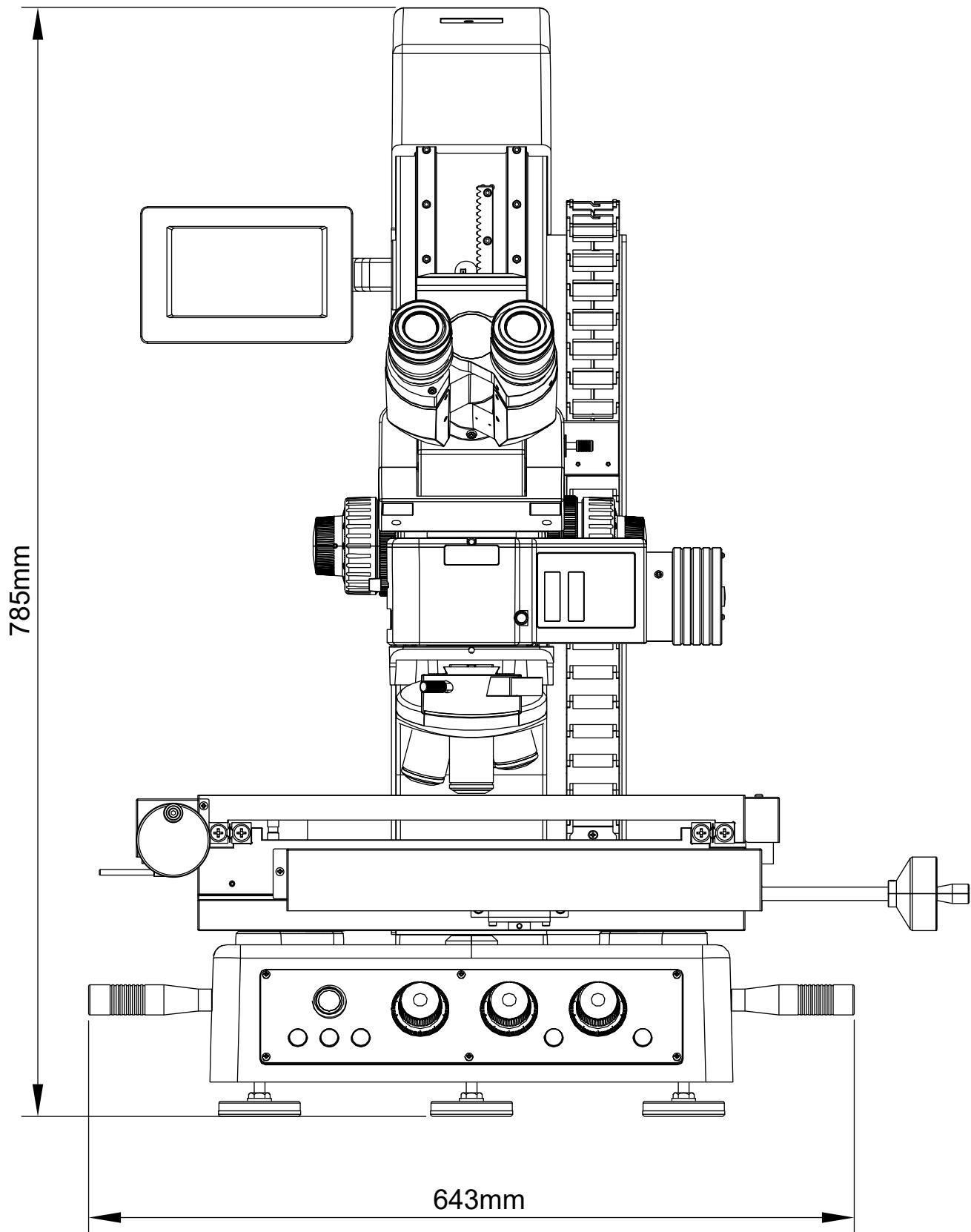
# Software Interface



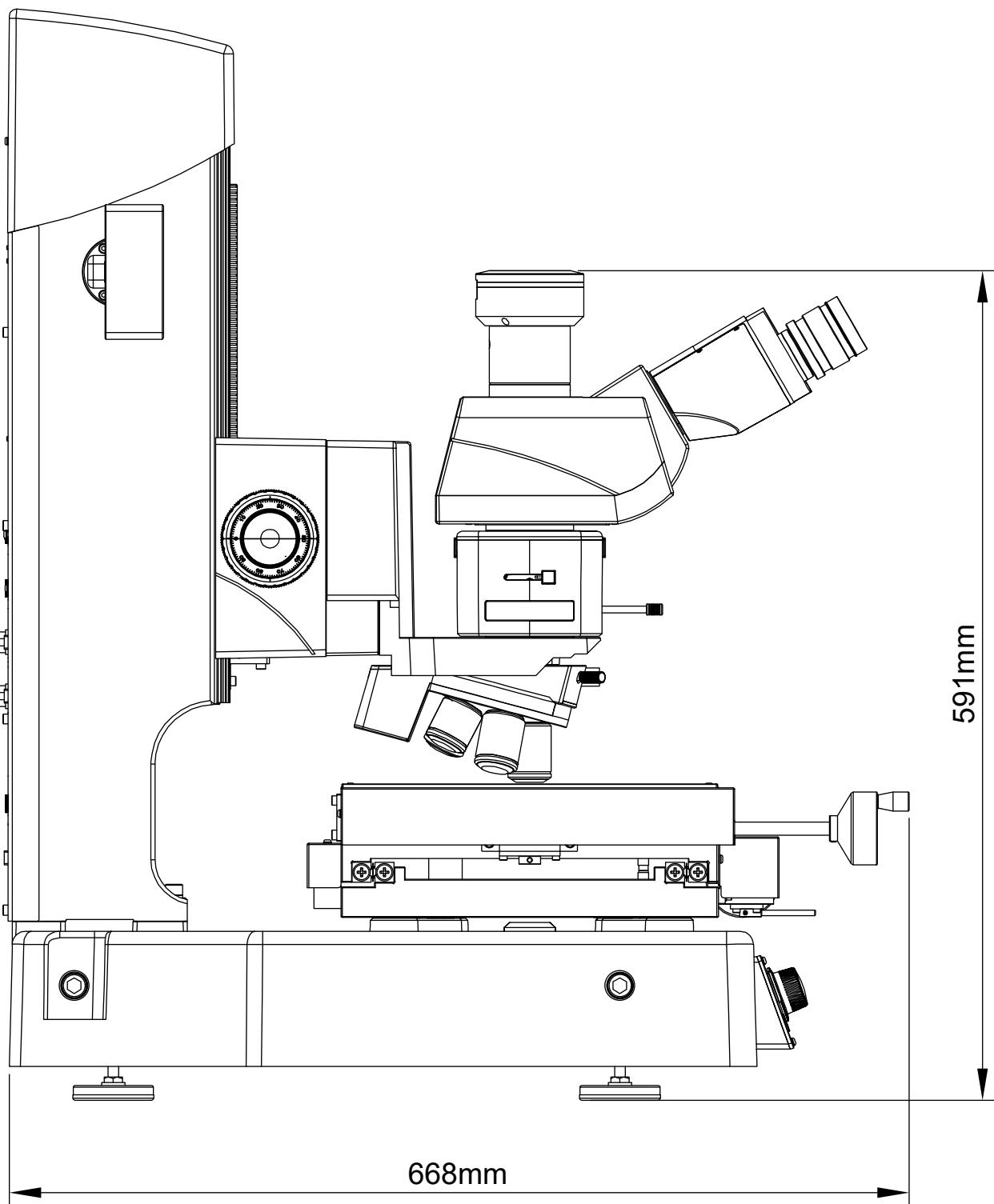
## Software functions :

- **Measurement functions include measuring distance, angle, circle, distance from a point to a line, parallel lines, and polygons.**
- **Functions such as taking photos, recording videos, white balance adjustment, and automatic exposure.**
- **Users can set their own measurement standards, including straight line and circle standards, and there are multiple units available for selection.**
- **It is possible to set the color of the scale lines and the diameter of the scale lines.**
- **It includes the functions of depth-of-field fusion and image stitching.**
- **It includes an auxiliary focusing function, enabling users to focus more quickly.**

## Instrument Dimension



## Instrument Dimension



# Technical Specification

|                               |   |   |              |  |  |
|-------------------------------|---|---|--------------|--|--|
| <b>Model</b>                  | uVision-2015  | uVision-2015  | uVision-2015 |  |  |
| <b>Stroke(mm)</b>             | 200*150   | 300*200   | 400*300      |  |  |
| <b>Observation tube</b>       | Trinocular Observation tube. The light splitting ratio is 100:0, and the interpupillary distance is adjustable from 50mm to 75mm.                       |   |              |  |  |
| <b>Methods of observation</b> | BF/DF/PO/DIC(Optional)  |   |              |  |  |
| <b>Eyepiece</b>               | 10X/25(One of them is equipped with a crosshair)  |   |              |  |  |
| <b>Objective lens</b>         | Plan semi-apochromatic objective lens for bright and dark field   | Plan S-APO:5X BD DIC N.A0.15 WD=14.8<br>Plan S-APO:10X BD DIC N.A0.30 WD=13.6<br>Plan S-APO:20X BD DIC N.A0.40 WD=11.9<br>Plan S-APO:50X BD DIC N.A0.55 WD=8.7<br>Plan S-APO:100X BD DIC N.A0.80 WD=3.1 |              |  |  |
| <b>Focusing system</b>        | Manual coarse/fine focusing (Electric focusing is optional)   |   |              |  |  |
| <b>Auxiliary focusing</b>     | The green semi-circle is optional   |   |              |  |  |
| <b>Nosepiece</b>              | Manual Nosepiece;a 5-hole converter for bright and dark fields, with a DIC slot (an encoded Nosepiece is optional). (An electric Nosepiece is optional) |   |              |  |  |
| <b>Resolution</b>             | X,Y,Z 0.1um   |   |              |  |  |
| <b>CCD Camera</b>             | A 6-megapixel camera with a CCD chip and USB 3.0 interface (A 12-megapixel camera is optional)  |   |              |  |  |
| <b>Camera interface</b>       | 0.65X C   |   |              |  |  |
| <b>Software</b>               | Take photos, save images, conduct measurements; perform depth-of-field fusion and image stitching   |   |              |  |  |
| <b>Light source</b>           | Transmitted Illumination: Illuminated by an LED parallel - light cold light source<br>Epi-illumination: Illuminated by an LED coaxial cold light source |   |              |  |  |
| <b>Working stage (mm)</b>     | Size of the metal platform:500*350<br>Size of the glass platform:350*250  |   |              |  |  |
| <b>Stroke(mm)</b>             | X:200,Y:150,Z:200   |   |              |  |  |
| <b>Measurement accuracy</b>   | 2.8+L/100um   |   |              |  |  |
| <b>Measurement height</b>     | 175mm   |   |              |  |  |
| <b>Digital readout</b>        | RS232   |   |              |  |  |



# Packing List

| Name  | QTY  | Remarks                                   |
|---|------|---|
| <b>Main unit</b>                                | 1set |   |
| <b>Eyepiece tube</b>                            | 1pc  |   |
| <b>5-hole Nosepiece</b>                         | 1pc  |   |
| <b>CCD Camera</b>                               | 1pc  | 600W                                      |
| <b>10X/25 Eyepiece</b>                          | 2pcs | One of them is equipped with a crosshair) |
| <b>Optical path for bright and dark fields</b>  | 1pc  |   |
| <b>LM PIan S-APO:5X BD DIC N.A0.15 WD=14.8</b>  | 1pc  |   |
| <b>LM PIan S-APO:10X BD DIC N.A0.30 WD=8.5</b>  | 1pc  |   |
| <b>LM PIan S-APO:20X BD DIC N.A0.40 WD=11.9</b> | 1pc  |   |
| <b>LM PIan S-APO:50X BD DIC N.A0.55 WD=8.7</b>  | 1pc  |   |
| <b>LM PIan S-APO:100X BD DIC N.A0.80 WD=3.1</b> | 1pc  | Optional                                  |
| <b>Digital readout</b>                          | 1pc  |   |
| <b>Polarizer</b>                                | 1pc  |   |
| <b>Analyzer</b>                                 | 1pc  |   |
| <b>Power cord</b>                               | 1pc  |   |